

What is claimed is:

1. A display device comprising:

a first input terminal which receives an analog image signal;

5 a second input terminal which receives a digital image signal;

an analog-to-digital converter connected to said first input terminal;

10 a first switch which selects for output between a digital signal outputted from said analog-to-digital converter and a digital signal inputted to said second input terminal; and

a gradation circuit which converts a digital signal outputted from said first switch into a signal indicative of a level of pseudo gradation, said gradation circuit comprising:

15 an error diffusion circuit which converts said digital signal outputted from said first switch into a signal indicative of a level of pseudo gradation by an error diffusion method;

20 a dither pattern circuit which converts said digital signal outputted from said first switch into a signal indicative of a level of pseudo gradation by a dithering method; and

25 a second switch which selects for output between an output signal of said error diffusion circuit and an output signal of said dither pattern circuit.

2. The display device according to claim 1, wherein said first switch is operatively switched by a user.

3. The display device according to claim 1, wherein said

09867098-052901  
T06250-8607860

second switch is operatively switched by a user.

4. The display device according to claim 1, wherein said gradation circuit comprises a noise detector which detects noise of an output signal of said first switch, and a switch controller  
5 which controls said second switch in accordance with a result of detection by said noise detector.

5. The display device according to claim 4, wherein said noise detector determines whether lower bits of an output signal of said first switch include noise or not.

10 6. The display device according to claim 5, wherein when it has been determined by said noise detector that noise is included, said switch controller causes said second switch to output an output signal of said error diffusion circuit.

15 7. The display device according to claim 5, wherein when it has been determined by said noise detector that noise is not included, said switch controller causes said second switch to output an output signal of said dither pattern circuit.

8. The display device according to claim 1, further comprising:

20 a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

9. The display device according to claim 2, further comprising:

25 a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

10. The display device according to claim 3, further

09867098 052901  
106250 8609860

comprising:

a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

5 11. The display device according to claim 4, further comprising:

a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

10 12. The display device according to claim 5, further comprising:

a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

15 13. The display device according to claim 6, further comprising:

a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

20 14. The display device according to claim 7, further comprising:

a driver which receiving an output signal of said second switch; and

a display panel to be driven by said driver.

25

09867098.052901